

## CHAPTER III

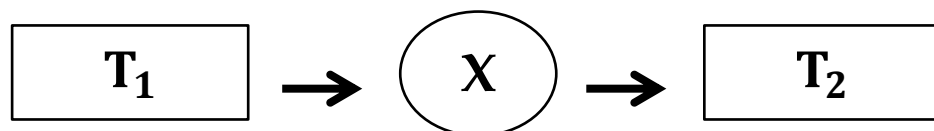
### RESEARCH METHOD

#### A. Research Design

The method of this research was *Pre-experiment* consisted of *One-group pretest-posttest* design. According to Sugiyono (2010, p.109), it was one of experimental studies that only observed the treatment product in one object group without control group as a comparison object because there was only one group study of eight class in that school where the writer would did a research. That was the reason why *Pre-experiment* consist with *One-group pretest-posttest* design.

In this study, the group would be given *Pre-test* before treatment and *Post-test* after treatment. So, the writer would get the products treatment after compared between *Pre-test* (situation before treatment) and *Post-test* (situation after treatment).

To clarified the design model of this pre-experiment, the illustration of *One-group pretest-posttest* (Kartono, 1999) as follow:



Picture 3.1. *Pre-experiment One-group Pretest-posttest Design* formula

Explanation:  $T_1$ : *pre-test* (situation before treatment)

$T_2$ : *post-test* (situation after treatment)

**X:** treatment with assembling recast strategy for 3 meetings

## **B. Research Setting**

This study took place in the eighth graders of MTs. Al-Mawahib Banjarmasin on AMD Manunggal Sungai Andai street North Banjarmasin where the writer taught practice of PPL 2 and found the problem. For four last years, this school had 3 classes (VII, VIII and XI) and each class only consisted with one group study. The school did not have so many students. And finally, the writer decided this school to did a research.

## **C. Population and Sample**

Population in this study was all students of eight graders MTs. Al-Mawahib Banjarmasin 2016-2017 curriculum. They were 24 students of eight graders.

Sugiyono said that sampling technique was one of method how to choose representative sample from the population. After considered the Sugiyono's theory, the witer choosed *Purposive sampling* which was act of determining sample based on certain purpose Suharsimi Arikunto (2002).

The purposive sampling above was been chosen based on considerations as follow:

- a. There was no research that held on the previous years in MTs. Al-Mawahib Banjarmasin.
- b. The (VIII) eighth graders students of MTs. Al-Mawahib Banjarmasin still experience a difficulties on English comprehension.
- c. There was only one study group for each class.

So, there were 24 sample that writer took in MTs. Al-Mawahib Banjarmasin.

#### **D. Research Instrument and Data Collection**

The writer thought that research instrument like a breath for the research itself. According to Suryabrata (2008, p.52), instrument of the research was a recorder a quantitative information about a condition or activities through a questions. Besides it, Hadjar (1996, p.160) also give an idea about research instrument which was a tool that use to get a quantitative information about variable characteristics variation objectivity.

An instruments that the writer used in this study were as follow:

1. *Documentary*, this technique was aim to collect project of students work from eight graders of MTs. Al-Mawahib Banjarmasin. This instrument was an important source in this research as detail information from the activities that would did in the research. Besides, this technique was also use to collect all written document of report which were able to give some data about students, teachers and school.
2. *Observation*, measured for the teacher and learners activities during the class. It would be done by observing a research object directly look for what activities would be happen during the class. It would be started when the writer as a researcher come to MTs. Al-Mawahib Banjarmasin did for a pre-test before a treatment and would be continued when the writer apply the

recast strategy for get the datas that was related by learning process until post-test after the strategy would have been applied.

3. *Objective Test (Test for pre-test and post-test)* measured for something to know anyone comprehension about it by the specific way. Arikunto (2008). It would be given by a series exercises that use for measure the students ability about the material (Simple Present Tense). The data would be submitted from pre-test before did a treatment (for detecting how far the students Englwash concept about “Simple Present Tense” material, then it would be compared with test result of post-test after a treatment.
4. *Interview*, a dialogue that was done by interviewer to get information from the participants. Through this research, the writer would interview the teacher especially about recast as corrective feedback. For teacher, writer would give a few questions about teacher perceptions the use of recast as follow:
  - a. *Recast promotes language acquasition.*
  - b. *Recast keeps the students’ mental and motivation.*

#### **E. Data Analysis Procedure**

Before the instrument used for the research, it would be tried on (VIII) eighth graders who would get a material. Instrument would be processed and analyzed after that.

**a. Measurement Design of Learning Outcomes**

In order to facilitated the phase of data analysis in chapter IV, then required a variable that would be measured in this study, namely student learning outcomes.

Indicator: Results of self-study on learning matrix multiplication. How to evaluated the results of self-study used the following formula:

$$NA = \frac{\sum X}{N} \times 100$$

Explanations:

$\sum X$  = the total number of scores obtained by the students

$N$  = Maximum total score.

Tabel 3.2 Interpretation of Learning Outcomes (Arikunto, 2009)

No	Score	Interpretation
1	80 – 100	Very Good
2	65 – <80	Good
3	55 – <65	Pair
4	40 – <55	Bad
5	0 – <40	Very Bad

**b. Data Analysis Technique**

$\sum f_i$  = amount of data

1. *Standard Deviation*

Standard deviation used to calculate the value of  $z_i$  in the normality test.

$$S = \sqrt{\frac{\sum f_i(x_i - \bar{x})^2}{n-1}}$$

Explanations:

$S$  = Standard Deviation

$\bar{x}$  = (mean)

$\sum f_i$  = number of data frequencies the- $i$ , where  $i = 1, 2, 3, \dots$

$n$  = the amount of data

$x_i$  = the- $i$  data, where  $i = 1, 2, 3, \dots$

## 2. *Variances*

The sample variance used in the calculation of homogeneity test in t test to calculated sample variance used formula:

$$S^2 = \frac{\sum f_i(x_i - \bar{x})^2}{n-1}$$

Explanations:

$S^2$  : sample variant

$x_i$  : the- $i$  data, where  $i = 1, 2, 3, \dots$

$\bar{x}$  : (mean)

$n$  : the amount of data.

## 3. *Validity Test*

Arikunto (2008, p.76) argued that the item score influences the valid instrument. So, the writer looked for the validity by connected all students score on one item (X) with all

score that students have gotten (Y) by *Product Moment Pearson Correlation* as follow:

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} - \{N \sum Y^2 - (\sum Y)^2\}}}$$

Explanations:

$r_{xy}$  = Correlation coefficient between X variable with Y variable

N = Total of test participant

X = Score for each item

Y = Total Score

(Arikunto, 2008, p.78)

According to Arikunto (2008, p.75) “correlation coefficient always between 1,00 until +1,00.” As follow was correlation coefficient interpretation:

*Between 0,800 – 1,00 Very High Validity.*

*Between 0,600 – 0,800 High Validity.*

*Between 0,400 – 0,600 Medium Validity.*

*Between 0,200 – 0,400 Low Validity .*

*Between 0,00 – 0,200 Very Low Validity.*

#### 4. *Reliability Test*

Arikunto (2008, p.86) also argued that “reliability was looking for how far the test could be trust for produce a consistent result”. The following was a formula how to get reliability by *Alfa* ( $\alpha$ ) – *Cronbach*:

$$r_{11} = \left( \frac{n}{n-1} \right) \left( 1 - \frac{\sum \sigma_i^2}{\sigma^2} \right)$$

Explanations:

$r_{11}$  : reliability

$\sum \sigma_i^2$  : total of score variant for each item

n : total of item

with a reject progression as follow:

*Between 0,81 – 1,00 Very High*

*Between 0,61 – 0,80 High*

*Between 0,41 – 0,60 Medium*

*Between 0,21 – 0,40 Low*

*< 0,20 Very Low*

( Arikunto, 2008, p.78)

## 5. *Normality Test*

It would test the normally data that would be tested in sthis study. Researcher used Chi-Squwere test of Sudjana (2005, p.273) as follow:

### a) *The significance Level*

The significance level used  $\alpha = 5\%$

### b) *Statwastic test*

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

*Explanations:*

O<sub>i</sub>: Frequency of hope

E<sub>i</sub>: the expected Frequency

K: the number of observations

This test uses program SPSS 22 of Kolmogrov Smirnov Test of normality in the study carried out used the program SPSS 22 with the provwasions if the significance was greater than 0.05 then it could be inferred.

## 6. *Homogeneity Test*



It was a test that used to made sure that the sample from the population was homogen as follow:

$H_0$ : sample was homogen

$H_1$ : sample was not homogen

$$F = \frac{S_1^2}{S_2^2}$$

*Explanations:*

F = the value of F count

$S_1^2$  = the biggest varian

$S_2^2$  = the smallest varian

The provisions of decision making was if the value of the probability of significance or value  $> 0.05$  then  $H_0$  received and vice versa.

## 7. Hypothesis Test

Hypothesis would be counted with :

$$H_0 : \mu_1 \leq \mu_0$$

$$H_a : \mu_1 > \mu_0$$

Hypothesis test would use formula as follow:

$$t_{hitung} = \frac{\bar{X} - \mu_0}{\frac{s}{\sqrt{n}}}$$

Where :

$\bar{X}$  = mean from *post-test*

$\mu_0$  = mean from *pre-test*

s = deviation standard *post-test*

n = total of sample

Test Criteria as follow:

If  $t_h \leq t_0$ ,  $H_0$  accepted.

If  $t_0 > t_h$ ,  $H_0$  ignored.

8. *Significant of Hypothesis test*

Determined the significant standard  $\alpha = 0,05$ . Then, looked for t table with a pattern db = n-1.

Test Criteria as follow:

If  $t_h \leq t_0$ ,  $H_0$  significant.

If  $t_0 > t_h$ ,  $H_0$  not significant.